

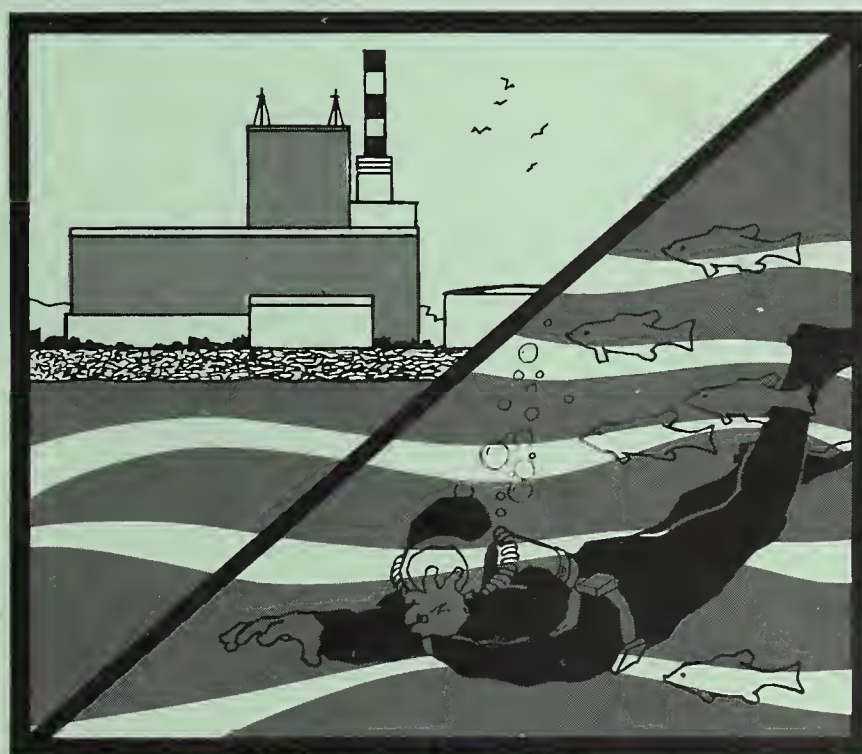
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An assessment of the effects of electrical power generation on marine resources in the Cape Cod Canal

APPENDIX



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Appendix I

Algae and Invertebrates Recorded in the Cape Cod Canal¹

¹ Algae classified after Taylor (1957)
Invertebrates classified after Smith (1964)

ALGAE

Division: Chlorophyta		green algae
Order: Ulotrichales	<i>Enteromorpha linza</i> (Linnaeus) J. Agardh <i>Enteromorpha</i> spp. <i>Ulva lactuca</i> Linnaeus	
Order: Cladophorales	<i>Chaetomorpha</i> sp. <i>Cladophora</i> sp.	
Order: Siphonales	<i>Codium fragile</i>	staghorn
Division: Phaeophyta		brown algae
Order: Ectocarpales	<i>Ectocarpus</i> sp. <i>Ectocarpus siliculosus</i> (Dillwyn) Lyngbye	
Order: Fucales	<i>Ascophyllum nodosum</i> (Linnaeus) LeJolis <i>Fucus vesiculosus</i> Linnaeus	knobbed rockweed rockweed
Order: Laminariales	<i>Chorda tomentosa</i> Lyngbye <i>Chorda filum</i> (Linnaeus) Lamouroux <i>Laminaria digitata</i> (Linnaeus) Lamouroux <i>Laminaria saccharina</i> (Linnaeus) Lamouroux <i>Laminaria</i> sp.	spaghetti weed kelp kelp
Order: Punctariales	<i>Scytosiphon lomentaria</i> (Lyngbye) C. Agardh	
Order: Chordariales	<i>Chordaria</i> sp.	
Division: Rhodophyta		red algae
Order: Bangiales	<i>Porphyra miniata</i> (Lyngbye) C. Agardh	
Order: Ceramiales	<i>Antithamnion cruciatum</i> (C. Agardh) Nageli <i>Callithamnion baileyi</i> Harvey <i>Ceramium</i> sp. <i>Ceramium rubriforme</i> Kylin <i>Ceramium rubrum</i> (Hudson) C. Agardh <i>Polysiphonia denudata</i> (Dillwyn) Kützting <i>Polysiphonia elongata</i> (Hudson) Harvey <i>Polysiphonia harveyi</i> Bailey <i>Polysiphonia urceolata</i> (Lightfoot) Greville <i>Polysiphonia novae — angliae</i> Taylor <i>Polysiphonia nigra</i> (Hudson) Batters <i>Polysiphonia nigrescens</i> (Hudson) Greville <i>Polysiphonia</i> sp.	
Order: Gigartinales	<i>Chondrus crispus</i> Stackhouse <i>Phyllophora interrupta</i> (Greville) J. Agardh	Irish sea moss
Order: Rhodymeniales	<i>Rhodymenia palmata</i> (Linnaeus) Greville	dulse
FLOWERING PLANT		eel grass
<i>Zostera marinus</i>		

INVERTEBRATA

Phylum: Porifera – Sponges

Class: Calcarea

Leucosolenia sp.

sponge

Scypha sp.

sponge

Class: Demospongiae

Order: Haplosclerida

Haliclona oculata (Linnaeus, 1759)

eyed finger sponge

Order: Halichondria

Halichondria panicea (Pallas, 1776)

crumb of beard sponge

Order: Poecilosclerida

Microciona prolifera (Ellis & Solander, 1786)

red bearded sponge

Order: Hadromerida

Cliona celata (Grant, 1826)

sulphur sponge

Phylum: Cnidaria (Coelenterata) Polyps

Class: Hydrozoa

Bougainvillia superciliaris (L. Agassiz, 1849)

long tentacled hydroid

Obelia geniculata (Linnaeus, 1758)

hydroid

Sertularia pumila (Linnaeus, 1758)

wreathed hydroid

Tubularia crocea (L. Agassiz, 1862)

pink hearted hydroid

Class: Anthozoa

Subclass: Zoantharia

Order: Actiniaria – Sea Anemones

Metridium dianthus (Ellis)

sea anemone

Metridium senile (Linnaeus)

sea anemone

Phylum: Platyhelminthes – Flatworms

Class: Turbellaria

Order: Polycladida

Notoplana atomata (O.F. Muller, 1776)

flatworm

Phylum: Nemertea – Ribbon Worms

Class: Anopla

Order: Heteronemertea

Cerebratulus lacteus (Leidy, 1851)

ribbon worm

Phylum: Aschelminthes – Round Worm

Class: Nematoda

Phylum: Annelida – Segmented Worms

Class: Polychaeta

Family: Cirratulidae

Family: Nereidae

Nereis (Nereis) pelagica Linnaeus, 1758

sea worm

Family: Pectinariidae

Pectinaria (Cystenides) gouldii (Verrill, 1873)

Family: Opheliidae

Family: Phyllodocidae

Eulalia viridis (Linnaeus, 1767)

worm

Family: Polynoidae

Harmothoe imbricata (Linnaeus, 1767)

scale worm

Lepidonotus sp.

Lepidonotus squamatus (Linnaeus, 1758)

scale worm

Family: Sabellidae

Family: Serpulidae

Spirorbis sp.

Spirorbis (Laeospira) granulatus (Linnaeus, 1767)

coiled worm

Spirorbis (Paradexiospira) violaceus Levinsen, 1883

coiled worm

Family: Terebellidae

Phylum: Arthropoda	
Class: Pycnogonida	
Class: Xiphosurida	
<i>Limulus polyphemus</i> (Linnaeus)	horseshoe crab
Class: Crustacea	
Subclass: Cirripedia	
Order: Thoracica	
<i>Balanus (Semibalanus) balanoides</i> (Linnaeus, 1767)	rock barnacle
<i>Balanus (Balanus) balanus</i> (Linnaeus, 1758)	acorn barnacle
Subclass: Lower Malacostraca (Peracarida)	
Order: Isopoda	
<i>Edotea triloba</i> (Say, 1818)	isopod
<i>Idotea phosphorea</i> Harger, 1873	isopod
<i>Limnoria lignorum</i> (Rathke, 1799)	gribble
<i>Nerocila munda</i> Harger, 1873	
<i>Chiridotea coeca</i> (Say, 1818)	
<i>Cirolana concharum</i> (Stimpson, 1853)	
Order: Amphipoda	
Family: Gammaridae	
Family: Ampithoidae	
<i>Ampithoe longimana</i> Smith, 1873	amphipod
Family: Caprellae	
<i>Caprella geometrica</i> (Say)	amphipod
<i>Caprella linearis</i> (Linnaeus)	amphipod
<i>Aeginella logicornis</i> (Kroyer)	amphipod
Family: Corophiidae	
<i>Jassa</i> sp.	
<i>Corophium volutator</i> (Pallas)	tube building amphipod
<i>Corophium cylindricum</i>	tube building amphipod
Subclass: Higher Malacostraca (Decapoda & Stomatopoda)	
Section: Caridea	
Family: Hippolytidae	
<i>Hippolyte</i> sp.	
Section: Brachyura	
Family: Cancridae	
<i>Cancer irroratus</i> Say, 1817	rock crab
<i>Cancer borealis</i> Stimpson, 1859	Jonah crab
<i>Carcinus maenas</i> (Linnaeus) (<i>Carcinides maenas</i>)	green crab
<i>Neopanope texana sayi</i> (Smith, 1869)	
<i>Pinnotheres</i> sp.	
<i>Planes minutus</i> (Linnaeus)	commensal crab
Section: Astracura	
Family: Homaridae	
<i>Homarus americanus</i> Milne — Edwards, 1837	American lobster
Section: Anomura	
Family: Paguridae	
<i>Pagurus longicarpus</i> Say, 1817	hermit crab
Class: Insecta	
Subclass: Pterygota	
Order: Diptera	
Family: Chironomidae	
Phylum: Mollusca	
Class: Gastropoda	
Subclass: Prosobranchia	
Order: Archaeogastropoda	
<i>Acmaea testudinalis</i> Muller	limpet
Order: Mesogastropoda	
<i>Littorina litorea</i> (Linnaeus)	common periwinkle
<i>Littorina obtusata</i> (Linnaeus)	obtuse periwinkle
<i>Littorina saxatilis</i> (Olivi)	rough periwinkle
<i>Turritella erosa</i> (Couthouy)	screw shell
<i>Lacuna vincta</i> (Montago)	common lacuna
<i>Lunatia heros</i> (Say) (<i>Polinices heros</i>)	moon snail
<i>Polinices</i> sp.	

	<i>Margarites helicina</i> (Fabricius)	top shell
	<i>Margarites (Solariella) obscura</i> Couthouy	top shell
	<i>Crepidula fornicata</i> (Linnaeus)	slipper shell
	<i>Bittium alternatum</i> (Say)	alternate bittum
Order:	Neogastropoda	
	<i>Mitrella lunata</i> (Say)	lunar dove shell
	<i>Anachis avara</i> (Say)	greedy dove shell
	<i>Nassarius vibex</i> (Say)	mottled dog whelk
	<i>Nassarius trivittatus</i> (Say)	
	<i>Thais lapillus</i> (Linnaeus)	dog whelk
Subclass:	Opisthobranchia	
Order:	Nudibranchia	
	<i>Dendronotus frondosus</i> (Ascanius, 1774)	bushy-backed sea slug
	<i>Onchidoris muricata</i> (Muller, 1776)	nudibranch
	<i>Tergipes despectus</i> (Johnston, 1835)	nudibranch
	<i>Aeolidia papillosa</i> (Linnaeus, 1761)	plumed sea slug
	<i>Acanthodoris pilosa</i> (Abildgaard, 1789)	nudibranch
	<i>Coryphella rufibranchialis</i> (Johnston, 1832)	vermillion-gilled nudibranch
Class:	Bivalvia	
Subclass:	Lamellibranchia	
Order:	Adapedonta	
	<i>Hiatella arctica</i> (Linnaeus)	artic saxicave
	<i>Zirfaea crispata</i> (Linnaeus)	rough piddock
	<i>Teredo navalis</i> (Linnaeus)	common shipworm
Order:	Anisomyaria	
	<i>Modiolus modiolus</i> Linnaeus	horse mussel
	<i>Mytilus edulis</i> Linnaeus	edible blue mussel
	<i>Anomia aculeata</i> Gmelin	common jingle shell
Order:	Heterodonta	
	<i>Cardium pinnatum</i> Conrad	cockle shell
	<i>Tagelus gibbus</i> (Spengles)	
	Tellinidae	
Phylum:	Ectoprocta	
Class:	Gymnolaemata	
Order:	Cyclostomata	
	<i>Crisia eburnea</i> (Linnaeus, 1758)	colonial bryozoan
Order:	Cheilostomata	
	<i>Bugula cucullifera</i> Osborn, 1912	bryozoan
	<i>Bugula simplex</i> Hincks, 1886	bryozoan
	<i>Bugula turrita</i> (Desor, 1848)	bryozoan
	<i>Callopora aurita</i> (Hincks, 1877)	bryozoan
	<i>Cryptosula pallasiana</i> (Moll, 1803)	disk encrusting bryozoan
	<i>Electra crustulenta</i> (Pallas, 1766)	bryozoan
	<i>Electra hastingiae</i> Marcus, 1938	bryozoan
	<i>Electra pilosa</i> (Linnaeus, 1767)	White oval windowed bryozoan
	<i>Schizoporella unicornis</i> (Johnston, 1847)	bryozoan, brick red
	<i>Scruparia ambigua</i> (d'Orbigny, 1841)	bryozoan
	<i>Tegella unicornis</i> (Fleming, 1828)	bryozoan
Phylum:	Echinodermata	
Class:	Asteroidea	
	<i>Asterias forbesi</i> (Desor, 1848)	common starfish
	<i>Asterias vulgaris</i> Verrill, 1866	purple starfish
Class:	Ophiuroidea	
	<i>Amphipholis squamata</i> (Delle Chiaje, 1828)	long armed snake star
	<i>Ophiopholis aculeata</i> (Linnaeus, 1767)	daisy brittle star
Class:	Echinoidea	
	<i>Strongylocentrotus drobachensis</i> (O.F. Muller, 1776)	green sea urchin

Phylum: Chordata

Class: Ascidiacea

Order: Phlebobranchia

Ciona spp.

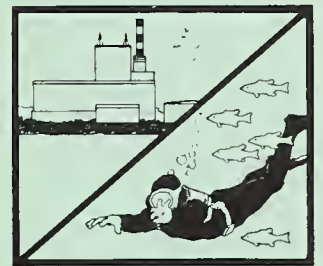
Order: Stolidobranchia

Botryllus schlosseri (Pallas, 1766)

Dendrodoa (Styelopsos) carnea (Agassiz, 1850)

Molgula complanata Alder & Hancock, 1848

colonial ascidian
red solitary ascidian
sea grapes



Appendix II

Occurrence and Distribution of Benthic Flora and Fauna Recorded in Sample Plots Along Five Transects in the Cape Cod Canal

Key

- A — Rare: occasionally occurring in the area.
- B — Sparse: widely scattered throughout the area but nowhere numerous.
- C — Common: unevenly present throughout the area and occasionally numerous.
- D — Abundant: unevenly distributed throughout the area but frequently numerous.
- E — Very abundant: numerous and evenly distributed throughout the area.

Numbers represent actual count.

Symbols in parentheses indicate occurrence within square foot sample plots.

Symbols not in parentheses indicate occurrence within 20-foot diameter sample plots.

Table I Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 1

During April - May, 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>							A		C			B			
Phaeophyceae															
<i>Laminaria saccharina</i>							B		B	B		B	A		B
<i>Chorda tomentosa</i>									B						
Rhodophyceae															
<i>Chondrus crispus</i>												A			
<i>Rhodomenia palmata</i>									B			B			
Invertebrata															
Coelenterata															
<i>Metridium dianthus</i>										1					A
<i>Obelia geniculata</i>									B			C			C
<i>Tubularia crocea</i>									A			B			C
Annelida															
Nereidae												(1)	(3)		
Phyllodoceidae												(2)	(6)		(2)
Polynoidae									(1)			(2)	(1)		(1)
Arthropoda															
<i>Cancer irroratus</i>							3		2	7		1	13		
<i>Carcinus maenas</i>										1					
Gammaridae									(11)						(1)
<i>Corophium volutator</i>															(1)
<i>Chiridotea coeca</i>															(1)
Nemertea															
<i>Cerebratulus lacteus</i>												(1)			(1)
Mollusca															
<i>Coryphella rufibranchialis</i>							1								
<i>Aeolidia papillosa</i>										1					
<i>Acmaea testudinalis</i>							C			C		A			A
<i>Littorina litorea</i>							C		D	C		B			B
<i>Mytilus edulis</i>							A			B					
<i>Nassarius trivittatus</i>												(1)			
Echinodermata															
<i>Asterias forbesi</i>							C		C	D		B	D		B
<i>Asterias vulgaris</i>										C		B	D		B
<i>Amphipholis squamata</i>													(1)		
<i>Strongylocentrotus drobachiensis</i>							B			C					

Table II Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 2
During April – May, 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>				A			D		D	A		A			
Phaeophyceae															
<i>Ascophyllum nodosum</i>	D			E											
<i>Laminaria saccharina</i>				A			D		C	B		D			B
<i>Laminaria digitata</i>				A			C		A						
<i>Chorda tomentosa</i>							C		B						
<i>Ectocarpus sp.</i>				D											
Rhodophyceae															
<i>Chondus crispus</i>				B			B		B	C		B			
<i>Rhodymenia palmata</i>							B		C	B		C			
Invertebrata															
Porifera															
<i>Haliclona oculata</i>				A			A		A	B		A			A
<i>Halichondria panicea</i>									B	A		B			B
Coelenterata															
<i>Obelia geniculata</i>							D		C	C		D			C
<i>Bougainvillia superciliaris</i>										B					
<i>Sertularia pumila</i>				C											
<i>Metridium dianthus</i>				B					A	1					
<i>Tubularia crocea</i>									B						D
Nemertea															
<i>Cerebratulus lacteus</i>		S	S		S	S		S			S			S	(3)
Annelida															
Cirratulidae		L	L		L	L		L	(1)		L		(4)	L	
Nereidae		P	P		P	P	(2)	P			P	(1)		P	
Phyllodoceidae		M	M		M	M	(8)	M		(1)	M			M	
Polynoidae		A	A		A	A	(2)	A	(3)		A	(5)	(1)	A	(1)
Opheliidae		S	S		S	S		S	(4)	(1)	S	(1)		S	
<i>Pectinaria gouldii</i>															
Arthropoda															
<i>Balanus balanoides</i>		N	N		N	N		N			N			N	
<i>Balanus balanoides</i>	C			B								B			
Gammaridae									(7)			(1)			(1)
<i>Idotea phosphorea</i>										(1)					
<i>Homarus americanus</i>							2	1	1	1		1			
<i>Cancer irroratus</i>							2	1	1	3		1			
<i>Cancer borealis</i>							5	6		1		1			
<i>Carcinus maenas</i>				2											
<i>Neopanope texana</i>												1(1)			
<i>Limulus polyphemus</i>										1			1		
<i>Corophium volutator</i>								(1)				(1)			
<i>Pagurus spp.</i>															1
Mollusca															
<i>Acmaea testudinalis</i>				C								A			
<i>Littorina litorea</i>	C			D			B		A						
<i>Lacuna vincta</i>													(1)		
<i>Mytilus edulis</i>	B			B											
<i>Modiolus modiolus</i>													A		
Tellinidae								(1)							
<i>Nassarius trivittatus</i>								(14)							
<i>Mitrella lunata</i>															(1)
Echinodermata															
<i>Asterias forbesi</i>				B			C		C	C		B	C		C
<i>Asterias vulgaris</i>							A		C	B		B	D		B
<i>Amphipholis squamata</i>							(1)					(7)			(2)
<i>Strongylocentrotus drobachensis</i>															1

Table III Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 3
During April – May, 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Enteromorpha sp.</i>			B			B									
<i>Ulva lactuca</i>				B		D	C		C	A					
<i>Chaetomorpha sp.</i>				B			A								
<i>Cladophora sp.</i>							B								
Phaeophyceae															
<i>Ascophyllum nodosum</i>	B		B												
<i>Fucus vesiculosus</i>	A					A									
<i>Laminaria saccharina</i>							B		E			E			A
<i>Laminaria digitata</i>							C		C			B			
<i>Chorda tomentosa</i>							D								
<i>Chordaria sp.</i>						C									
Rhodophyceae															
<i>Chondrus crispus</i>							C		C			C			
<i>Rhodomenia palmata</i>							B		C						
Invertebrata															
Porifera															
<i>Haliclona oculata</i>							B								A
<i>Halichondria panicea</i>							B								A
<i>Cliona celata</i>													A		
Coelenterata															
<i>Obelia geniculata</i>							B		E			E			B
<i>Tubularia crocea</i>						A						C	(A)		E
<i>Metridium dianthus</i>							B					A			A
<i>Bougainvillia supercilialis</i>		S			S			S	B		S	B		S	
Nemertea															
<i>Cerebratulus lacteus</i>		P			P			P			P			P	(1)
Annelida															
Nereidae		A			A		(26)	A		(18)	A	(2)	(6)	A	(2)
Phyllodocidae		S			S			S		(2)	S			S	
Polynoidae							(1)		(6)	(3)		(9)			(8)
Serpulidae		O			O			O	(1)		O			O	
Arthropoda															
<i>Balanus balanoides</i>	E		E	B		E									
Gammaridae							(1)		(5)						(3)
<i>Idotea phosphorea</i>									(35)	(2)			(3)		(1)
<i>Homarus americanus</i>							2		1			1			
<i>Cancer borealis</i>							11		4				1		
<i>Cancer irroratus</i>							6		1	20		1		232	
<i>Neopanope texana</i>									(1)						
Mollusca															
<i>Coryphella rufibranchialis</i>							B			C					
<i>Acmaea testudinalis</i>							B								
<i>Littorina litorea</i>	C		C	C			B								
<i>Littorina obtusata</i>							(1)								
<i>Lacuna vincta</i>							C								
<i>Mytilus edulis</i>	E			E			C			E		A	D		
<i>Zirfaea crispata</i>									(1)						
<i>Mitrella lunata</i>															(24)
<i>Hiatella arctica</i>							(1)								
Echinodermata															
<i>Asterias forbesi</i>				A		B	D		C	E		C	E		C
<i>Asterias vulgaris</i>							C			E			E		C
<i>Ophiopholis aculeata</i>							(1)			(1)			(1)		
<i>Strongylocentrotus drobachensis</i>									(1)						
Chordata															
Tunicata															
<i>Molgula sp.</i>									(2)						

Table IV Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 4
During April – May, 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>	C			C		C	C			A		A			
<i>Enteromorpha</i> sp.	C					B									
<i>Cladophora</i> sp.							B								
<i>Chaetomorpha</i> sp.				C											
Phaeophyceae															
<i>Ascophyllum nodosum</i>	D		D	C		B									
<i>Fucus vesiculosus</i>	B		C			C									
<i>Laminaria saccharina</i>				C			E			B		C			
<i>Laminaria digitata</i>				B			B			B		B			
<i>Chorda tomentosa</i>				B											
<i>Chordaria</i> sp.						D									
Rhodophyceae															
<i>Chondrus crispus</i>	C			D		B	C			D		D	C		C
<i>Rhodymenia palmata</i>	A			A			C					B			
Invertebrata															
Porifera															
<i>Haliclona oculata</i>				C		A				C		B			A
<i>Halichondria panicea</i>				B		A				C		C	B		A
<i>Cliona celata</i>															A
Coelenterata															
<i>Obelia geniculata</i>							B			B		C	A		
<i>Bougainvillia superciliaris</i>										(C)		C	B		D
<i>Tubularia crocea</i>						B						B			B
Annelida															
Nereidae			S							(12)		(7)	(4)		(1)
Phyllodoceidae			E				(10)	S		(2)	S		(3)		
Polynoidae			L				(1)	E		(7)		(4)			(1)
Serpulidae			L					L		(C)					
Arthropoda															
<i>Balanus balanoides</i>			B			B									
<i>Balanus balanoides</i>				B			B			(A)					
Gammaridae							(10)			(23)		(4)	(3)		(1)
Corophiidae							(C)			(D)			(C)		
<i>Idotea phosphorea</i>							(8)	O	O		O		(1)	O	
<i>Homarus americanus</i>	1	Z					(B)	Z	Z	(C)	Z	(9)	(4)	Z	
<i>Pagurus longicarpus</i>				1			2			1		2			
<i>Cancer irroratus</i>							1								
<i>Cancer borealis</i>							3			3		(1)	2		
<i>Neopanope texana</i>												1			
<i>Carcinus maenas</i>										(12)		(1)			
<i>Pinnothere</i> sp.						2	2								
Mollusca															
<i>Dendronotus frondosus</i>															
<i>Acanthodoris pilosa</i>				2						C					
<i>Coryphella rufibranchialis</i>				1											
<i>Acmaea testudinalis</i>										(1)					
<i>Littorina littorea</i>	1														
<i>Littorina obtusata</i>	C		D	C		C						A			
<i>Lacuna vincta</i>	A		A												
<i>Lunatia heros</i>							C								
<i>Mytilus edulis</i>										1					
<i>Hiatella arctica</i>	B					B						C			A
<i>Zirfaea crispata</i>							(B)			(B)					
<i>Mitrella lunata</i>							C					B(1)			(14)
Echinodermata															
<i>Asterias forbesi</i>															
<i>Asterias vulgaris</i>	1					B				C		C	C		C
<i>Ophiopholis aculeata</i>	1											C			C
<i>Amphipholis squamata</i>										(7)					
							(1)			(2)		(2)			
Chordata															
Tunicata															
<i>Molgula</i> sp.													(1)		

Table V Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 5
During April – May, 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>	A			B			B		C						
Phaeophyceae															
<i>Laminaria saccharina</i>							E		D	B		B			
<i>Laminaria digitata</i>							C		C						
Rhodophyceae															
<i>Rhodymenia palmata</i>							B		C	B					
<i>Chondrus crispus</i>				B			E		D	D		C	B		
Flowering Plants															
<i>Zostera marinus</i>				D											
Invertebrates															
Porifera															
<i>Cliona celata</i>										C		B	B		C
<i>Haliclona oculata</i>							C		C	C		C	B		A
<i>Halichondria panicea</i>							C		B	C		C	C		C
Coelenterata															
<i>Obelia geniculata</i>							(C)		C			C			
<i>Bougainvillia superciliaris</i>							(A)		C	(C)		C	(A)		C
<i>Metridium dianthus</i>							B		A	B		B	A		A
<i>Tubularia crocea</i>									B			B			B
Annelida															
Nereidae							(6)		(8)	(6)		(5)	(3)		(3)
Phyllodocidae							(2)			(2)			(4)		
Polynoidae		S	S		S	S	(10)	S	(10)	(9)	S	(4)		S	(5)
Serpulidae		P	P		L	L	(D)	E			P			L	
Arthropoda															
<i>Balanus balanus</i>		P	P		P	P		P			P			P	
<i>Balanus balanoides</i>	E	M	M	D	M	M		M			M	A		M	B
Gammaridae		A	A		A	A	(B)	A	(18)	(8)	A	(3)		A	
Corophiidae		S	S		S	S	(C)	S		(E)	S		(C)	S	
<i>Caprella linearis</i>													(1)		
<i>Idotea phosphorea</i>		O	O		O	O	(C)	O	(68)	(C)	O	(10)	(2)	O	(1)
<i>Homarus americanus</i>		N	N		N	N	4	N	8	13	N	15	3	N	3
<i>Cancer irroratus</i>									1				2		1
<i>Cancer borealis</i>							1		2	4		3			2
<i>Neopanope texana</i>							(1)		(10)	(4)		(1)	(1)		
Pyconogonida													(2)		
Mollusca															
<i>Dendronotus frondosus</i>							(1)								
<i>Acanthodoris pilosa</i>							(2)								
<i>Coryphella rufibranchialis</i>													(1)		
<i>Littorina litorea</i>	D			D					A						
<i>Lacuna vincta</i>							C								
<i>Mytilus edulis</i>	D			D								A			
<i>Modiolus modiolus</i>							B								B
<i>Cardium pinnulatum</i>							(2)								
<i>Hiatella arctica</i>							(C)			(D)			(B)		
<i>Zirfaea crispata</i>							B		(1)			(8)			(2)
<i>Nassarius trivittatus</i>									(1)						(1)
<i>Mitrella lunata</i>									(4)						
<i>Polinices sp.</i>															1
Echinodermata															
<i>Asterias forbesi</i>							B		B	C		B	C		D
<i>Asterias vulgaris</i>															B
<i>Ophiopholis aculeata</i>							(1)			(2)					
<i>Amphipholis squamata</i>							(1)		(6)			(6)	(1)		
Chordata															
Tunicata															
<i>Molgula sp.</i>							(B)		(3)	(D)		(8)			

Table VI Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 1
During July — August 1967, 1968, 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>							B	D	C		A	A			
<i>Enteromorpha</i> sp.							B	B							
Phaeophyceae															
<i>Laminaria saccharina</i>								C	D	A	C	C			B
<i>Ectocarpus</i> sp.							C								
<i>Chorda filum</i>								A	C		A				
<i>Chordaria</i> sp.									B						
Rhodophyceae												A			
<i>Rhodomenia palmata</i>															
Invertebrata															
Coelenterata															
<i>Tubularia crocea</i>							C	D	A	E	E		D	E	
<i>Metridium dianthus</i>										1	A	A			
<i>Obelia geniculata</i>									B			B			A
Annelida															
Polynoidae							(5)	(8)	(8)		(1)	(1)		(6)	(3)
Nereidae							(3)		(1)		(1)				(2)
Phyllodoceidae									(2)			(1)			
Arthropoda															
Gammaridae							(2)	(7)	(1)		(2)	(1)		(2)	(2)
<i>Cancer irroratus</i>							1		2	2		(1)	1	(1)	(3)
<i>Idotea phosphorea</i>									(1)					(4)	(1)
Pyconogonida								(9)			(26)	(1)		(11)	(7)
Pagurus sp.														1	
Platyhelminia												(7)			
Mollusca															
<i>Littorina litorea</i>							D		(1)B	C		B	B		A
<i>Acmaea testudinalis</i>													B		
<i>Lacuna vincta</i>									(37)B			(2)			
<i>Mytilus edulis</i>									C			D			E
<i>Polinices</i> sp.												1			2
<i>Dendronotus frondosus</i>											A	(1)		(3)C	A
<i>Coryphella rufibranchialis</i>								(2)							
<i>Mitrella lunata</i>										(7)				(1)	(3)
Pagurus sp.														1	
Echinodermata															
<i>Asterias forbesi</i>							B	B	B	B	B	C	B	C	C
<i>Asterias vulgaris</i>							B	B		B		B	B	B	C
<i>Strongylocentrotus drohbachiensis</i>										3			3		
<i>Amphipholis squamata</i>							(1)	(1)							

N O S A M P L E S
(SHIFTING GRAVEL SUBSTRATE)

N O S A M P L E S
(SHIFTING GRAVEL SUBSTRATE)

Table VII Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 2

During July — August 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>						C	D	D	D	B	B	A			
<i>Codium fragile</i>						B			A						
<i>Enteromorpha sp.</i>			A			B									
Phaeophyceae															
<i>Laminaria saccharina</i>						B	D	D	D	C	C	D		B	C
<i>Laminaria digitata</i>							C	B		B	B	B			
<i>Chorda filum</i>								C	C						
<i>Fucus vesiculosus</i>			B			B									
<i>Ascophyllum nodosum</i>			B												
<i>Chordaria sp.</i>						B									
Rhodophyceae															
<i>Chondrus crispus</i>						A	C	B	B	B	B	B			
<i>Rhodomenia palmata</i>							C	B	B	A	B	C			
Flowering Plants															
<i>Zostera marinus</i>						B									
Invertebrata															
Porifera															
<i>Haliclona oculata</i>							B	B	B	A	B	A			
<i>Halichondria panicea</i>							B	A	A	B	A	B	B	B	B
Coelenterata															
<i>Tubularia crocea</i>							C	D	B	D	E	C	D	E	D
<i>Metridium dianthus</i>						C	1	A	A		A	A			
<i>Obelia geniculata</i>							C	B	C	C	B	C	C		B
<i>Bougainvillia superciliaris</i>							B				A	A	B	B	
Ectoprocta															
<i>Bugula turrita</i>	S	S		S	S		B								
Annelida															
Nereidae	P	P		P	P			(1)		(3)	(2)	(1)	(3)	(1)	(3)
Phyllodoceidae	M	M		M	M								(1)		
Polynoidae	A	A		A	A			(1)	(3)	(18)	(3)	(5)	(17)	(3)	(5)
Serpulidae	S	S		S	S			(1)							
Cirratulidae								(1)			(1)				
Terebellidae	O	O		O	O				(1)						
<i>Pectinaria gouldii</i>	Z	Z		Z	Z			(2)	(1)		(1)			(1)	
Nemertea															
<i>Cerebratulus lacteus</i>								(1)							
Arthropoda															
<i>Cancer irroratus</i>							1	4			3	(1)		(1)	
<i>Cancer borealis</i>							5	2			7			1	
<i>Homarus americanus</i>							4	3	2	1		1			
Gammaridae							(1)		(1)	(2)					
<i>Nerocila munda</i>										(1)					
<i>Idotea phosphorea</i>													(1)		
Pycnogonidia							(1)			(1)			(1)		
<i>Balanus balanoides</i>			B												
<i>Carcinus maenas</i>						3									
Mollusca															
<i>Littorina litorea</i>			D			D	B					B			
<i>Littorina saxatilis</i>										(1)			(1)		
<i>Modiolus modiolus</i>										A			1		
<i>Hiatella arctica</i>							(2)								
<i>Turritella erosa</i>							(1)			(1)		(2)			(1)
<i>Nassarius vibex</i>							(3)								
<i>Nassarius trivittatus</i>								(5)	(4)			(1)			(1)
<i>Mitrella lunata</i>									(7)			(3)			(1)
<i>Lacuna vincta</i>															(1)
<i>Mytilus edulis</i>								A			A			A	
Echinodermata															
<i>Asterias forbesi</i>			A			B	B	B	C	C	C	C	C	C	C
<i>Asterias vulgaris</i>							B	B		B	B	B	C	C	B
<i>Strongylocentrotus drobachensis</i>							(2)				(2)				
<i>Amphipholis squamata</i>												(1)			

Table VIII Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 3

During July – August 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>				B			B	B	C		A				
Phaeophyceae															
<i>Ascophyllum nodosum</i>				A											
<i>Fucus vesiculosus</i>				A											
<i>Laminaria saccharina</i>							E	E	E		E	D			B
<i>Laminaria digitata</i>							C	C	C						
Rhodophyceae															
<i>Chondrus crispus</i>							C	B	D		B	B			
<i>Rhodymenia palmata</i>							C	B	C			C			
Invertebrata															
Porifera															
<i>Haliclona oculata</i>							A	B							
<i>Halichondria panicea</i>							A	B	A						
<i>Cliona celata</i>													A		
Coelenterata															
<i>Tubularia crocea</i>							D	C	C	C	C	D	B	E	E
<i>Obelia geniculata</i>							D	D	C		A	C			B
<i>Bougainvillia supercilialis</i>								B	C		B	B		A	
<i>Metridium dianthus</i>								B	A		A				
<i>Sertularia sp.</i>													B		
Annelida															
Nereidae	S	S	S		S	S									
Phyllodoceidae	E	E	E		E	E		(2)	(5)	(2)	(1)	(13)	(5)	(2)	(3)
Polynoidae	L	L	L		L	L									(1)
	P	P	P		P	P	(4)	(3)	(7)	(2)	(3)	(7)		(1)	(4)
Arthropoda															
<i>Cancer irroratus</i>	M	M	M		M	M									
<i>Cancer borealis</i>	A	A	A		A	A	6		2	2	1	2	(1)		2
<i>Homarus americanus</i>	S	S	S		S	S	1	5	1						
<i>Idotea phosphorea</i>							10	3	5			1			
<i>Cirolana concharum</i>	O	O	O		O	O		(16)	(3)		(1)	(1)		(2)	
<i>Balanus balanoides</i>	Z	Z	Z		Z	Z						(1)			
<i>Balanus balanoides</i>				C											
<i>Balanus balanoides</i>								A							
<i>Carcinus maenas</i>				1											
Gammaridae							(4)	(5)						(3)	
Pycnogonida							(2)	(1)			(1)			(4)	
Caprellidae							(3)								
Mollusca															
<i>Littorina litorea</i>				C								B			
<i>Littorina obtusata</i>				A											
<i>Mytilus edulis</i>				D			A	A		A		(D)C		(E)	E
<i>Thais lapillus</i>				B											
<i>Mitrella lunata</i>							(2)	(5)	(77)			(8)		(1)	(7)
<i>Zirfaea crispata</i>									(4)			(1)			
<i>Lacuna vincta</i>								(1)	(2)		(1)	(1)			(1)
Nudibranchia									(2)						
<i>Nassarius trivittatus</i>															(1)
<i>Acmaea testudinalis</i>												(1)			
Echinodermata															
<i>Amphipholis squamata</i>							(1)	(2)			(2)	(3)			
<i>Asterias forbesi</i>				C			C	C	C	D	B	C	E	C	C
<i>Asterias vulgaris</i>							C	B	B	C	B	B	D	C	C
<i>Strongylocentrotus drobachensis</i>											(2)	(1)			(1)
Chordata															
Tunicata															
<i>Molgula sp.</i>									(1)						

Table IX Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 4
During July – August 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>				E			B	D		A		B			
<i>Enteromorpha sp.</i>				C											
Phaeophyceae															
<i>Ascophyllum nodosum</i>				D				A							
<i>Fucus vesiculosus</i>				C											
<i>Laminaria saccharina</i>							E	D		C	C	D			A
<i>Laminaria digitata</i>							C	B		B	B	C			A
Rhodophyceae															
<i>Chondrus crispus</i>				D			C	C		C	C	D	B	B	B
<i>Rhodomenia palmata</i>							C	C		B	C	C		C	A
Invertebrata															
Porifera															
<i>Haliclona oculata</i>				B			B	B		B	A	B	B		A
<i>Halichondria panicea</i>							B	A		B	C	C	B	B	B
Coelenterata															
<i>Tubularia crocea</i>							B			B	B		C	C	D
<i>Obelia geniculata</i>							E	C		C	C	C	C	C	
<i>Bougainvillia superciliaris</i>	S	S	S		S	S				C	B	C	C	C	
<i>Sertularia sp.</i>	E	E	E		E	E							B		
Annelida															
<i>Nereidae</i>	M	M	M		M	M				(16)		(2)	(2)	(3)	(4)
<i>Phyllodoceidae</i>	A	A	A		A	A						(1)	(1)	(2)	
<i>Polynoidae</i>	S	S	S		S	S				(2)		(6)	(3)		(2)
Arthropoda															
<i>Cancer borealis</i>	O	O	O		O	O	1	3	O	5	1	4		1	
<i>Cancer irroratus</i>	Z	Z	Z		Z	Z		2	Z		(2)				(3)
<i>Homarus americanus</i>								6		5	3	1	2		
<i>Hippolytidae</i>														(1)	
<i>Balanus balanus</i>				C				B			A	A			
<i>Carcinus maenas</i>				3						(1)					
<i>Neopanope texana</i>										(6)		(1)			
<i>Idotea phosphorea</i>										(5)		(12)	(1)	(7)	
<i>Gammaridae</i>											(2)		(2)	(2)	(2)
Mollusca															
<i>Littorina litorea</i>				C				(1)		A			B		A
<i>Mytilus edulis</i>				C				B			B	C		A	
<i>Zirfaea crispata</i>								B		B	(10)C	(5)C			
<i>Hiatella arctica</i>										(8)	(1)				
<i>Nassarius trivittatus</i>												(11)			
<i>Mitrella lunata</i>								(10)				(55)		(1)	(8)
<i>Lacuna vincta</i>								(1)				(1)			
Echinodermata															
<i>Asterias forbesi</i>				B			C	B		B	C	C	D	C	C
<i>Asterias vulgaris</i>							B			B			C	B	B
<i>Amphipholis squamata</i>								(5)		(4)					
<i>Strongylocentrotus drobachensis</i>								2							

Table X Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 5

During July — August 1967, 1968 & 1969

Species	A-1 (intertidal)			A-2 (subtidal)			B (15 ft.)			C (30 ft.)			D (45 ft.)		
	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969	1967	1968	1969
Algae															
Chlorophyceae															
<i>Ulva lactuca</i>							A	B	B		A				
<i>Codium fragile</i>									B						
Phaeophyceae															
<i>Laminaria saccharina</i>							D	D	C	B	B	B			
<i>Laminaria digitata</i>							B	B	A	A	A	A			
Rhodophyceae															
<i>Chondrus crispus</i>								C	D	D	C	D			
<i>Rhodomenia palmata</i>							B	C	B	B	B				
Flowering Plants															
<i>Zostera marinus</i>						C									
Invertebrata															
Porifera															
<i>Haliclona oculata</i>							C	C	C	D	C	D	B	B	B
<i>Halichondria panicea</i>							C	C	C	D	C	C	C	B	C
<i>Cliona celata</i>							B	B		C	B	C	B	B	C
Coelenterata															
<i>Tubularia crocea</i>							B	B		D	C	B	E	D	C
<i>Metridium dianthus</i>							B	B	B	C	B	B	1	A	B
<i>Obelia geniculata</i>							E	D		B	B				
<i>Bougainvillia superciliaris</i>							B	C	D	B	D	D	B	C	B
<i>Sertularia sp.</i>								B			A		B		
Ectoprocta															
<i>Bugula turrita</i>							C			B					
Annelida															
Nereidae		S			S		(1)		(1)	(8)	(8)	(2)	(6)	(1)	(3)
Phyllodoceidae		L			L							(3)			(2)
Polynoidae		P			P		(1)	(6)	(2)	(7)		(8)	(1)	(1)	(3)
Serpulidae		P			P				(4)						
Nemertea															
<i>Cerebratulus lacteus</i>		M			M		(1)								
Arthropoda															
<i>Cancer irroratus</i>		S			S										(2)
<i>Cancer borealis</i>		O			O		1	2	4		1	1	1		
<i>Homarus americanus</i>		Z			Z		9	6	6	10	8	18	7	2	4
<i>Balanus balanus</i>							B	B	(1)B	C	B		A	A	A
<i>Balanus balanoides</i>						C									
<i>Carcinus maenas</i>						1									
Gammaridae							(1)		(1)	(2)			(1)		(1)
<i>Idotea phosphorea</i>							(1)	(1)	(2)	(1)					
<i>Neopanope texana</i>								(1)	(2)	(6)	(3)	(23)	(1)		
<i>Planes minutus</i>							(1)								
Corophiidae								(2)							
Mollusca															
<i>Littorina litorea</i>	C		D			E	A			A			A	A	
<i>Littorina obtusata</i>	A					A									
<i>Littorina saxatilis</i>	B														
<i>Mytilus edulis</i>	C		C			E			A	B	B		B		
<i>Thais lapillus</i>	B		B												
<i>Mitrella lunata</i>							(12)		(31)	(8)		(9)			(1)
<i>Tagelus gibbus</i>												(3)			
<i>Zirfaea crispata</i>															(1)
<i>Nassarius trivittatus</i>									(20)						
<i>Modiolus modiolus</i>											B				B
Echinodermata															
<i>Asterias forbesi</i>						B	C		B	C	C	C	D	E	D
<i>Asterias vulgaris</i>							B			B			C	C	B
<i>Amphipholis squamata</i>								(1)	(1)	(10)					(1)
<i>Strongylocentrotus drobachensis</i>							(1)		A						(1)A
<i>Ophiopholis aculeata</i>											(3)				
Chordata															
Tunicata															
<i>Molgula sp.</i>										(3)					(1)

Table XI Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 1
During October – November, 1967*

Species	A-1 (intertidal)	A-2 (subtidal)	B (15 ft.)	C (30 ft.)	D (45 ft.)
Invertebrata					
Annelida	S	S			
Nereidae	E	E	(5)		(3)
Arthropoda	L	L			
Gammaridae	P	P	(5)		(3)
<i>Idotea phosphorea</i>	M	M	(2)	(2)	(4)
<i>Cancer irroratus</i>	A	A		(1)	
<i>Corophium volutator</i>	S	S		(1)	
Pycnogonidia				(2)	(4)
Caprellidae	O	O			(1)
Mollusca	Z	Z			
<i>Acmaea testudinalis</i>				(1)	

*Square foot samples only



Table XII Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 2
During October — November, 1967

Species	A-1 (intertidal)	A-2 (subtidal)	B (15 ft.)	C (30 ft.)	D (45 ft.)
Algae					
Chlorophyceae					
<i>Ulva lactuca</i>			C		
Phaeophyceae					
<i>Laminaria saccharina</i>			D	B	
<i>Laminaria digitata</i>			C	B	
Rhodophyceae					
<i>Chondrus crispus</i>			C		
<i>Rhodymenia palmata</i>			B		
Invertebrata					
Porifera					
<i>Haliclona oculata</i>			B	B	B
<i>Halichondria panicea</i>				A	
Coelenterata					
<i>Obelia geniculata</i>	S	S	E	C	C
<i>Metridium dianthus</i>			A		A
<i>Bougainvillia superciliaris</i>				C	B
Ectoprocta					
<i>Bugula turrita</i>			B		
Annelida					
Nereidae	S	S		(3)	(1)
Phyllodocidae			(1)		
Polynoidae	N	N	(2)	(3)	(4)
Arthropoda					
<i>Cancer borealis</i>			5	3	
<i>Cancer irroratus</i>			5	4	
<i>Homarus americanus</i>			1	1	
Gammaridae			(6)	(1)	
<i>Idotea phosphorea</i>			(20)		
Caprellidae				(1)	(2)
<i>Neopanope texana</i>					(1)
Mollusca					
<i>Mytilus edulis</i>			A		
<i>Littorina litorea</i>				A	A
<i>Corophyella rufibranchialis</i>					(3)
Echinodermata					
<i>Asterias forbesi</i>			C	C	C
<i>Asterias vulgaris</i>			D	C	C
<i>Strongylocentrotus drobachiensis</i>				(1)	

Table XIII Dominant Plants and Animals (excluding fishes) Recorded in Sample Plots Along Transect 3
During October – November, 1967

Species	A-1 (intertidal)	A-2 (subtidal)	B* (15 ft.)	C (30 ft.)	D (45 ft.)
Algae					
Phaeophyceae					
<i>Laminaria saccharina</i>				B	
Rhodophyceae					
<i>Rhodomenia palmata</i>				A	
Invertebrata					
Porifera					
<i>Cliona celata</i>					A
Coelenterata	S	S			
<i>Tubularia crocea</i>	A			A	A
<i>Obelia geniculata</i>	B			B	
<i>Bougainvillia superciliaris</i>	C			C	C
<i>Sertularia sp.</i>	B			B	
Annelida					
Nereidae	N	N	(2)		(3)
Polynoidae	O	O	(2)	(1)	
Arthropoda					
Gammaridae			(1)	(2)	
<i>Idotea phosphorea</i>			(9)	(1)	(1)
Caprellidae				(1)	
<i>Cancer irroratus</i>				2	
Mollusca					
<i>Dendronotus frondosus</i>					3
Echinodermata					
<i>Asterias forbesi</i>				C	C
<i>Asterias vulgaris</i>				C	B

*Square foot samples only



Appendix III

Teredinidae and *Limnoria* spp. Activity on Wooden Test Panels in the Cape Cod Canal 1966 – 1969

Key*

Total No. of
tunnels per panel

Limnoria spp.

Attack Rating

Up to 132 tunnels

Trace (T)

Teredinidae

Up to 5

Trace (T)

6 to 25 (10%)

Slight (S)

26 to 100 or 25% filled

Moderate (M)

101 to 250 or 50% filled

Medium heavy (MH)

Over 250 or 75% filled

Heavy (H)

Filled, riddled or destroyed

Very Heavy (VH)

*Rating system of William F. Clapp Laboratories, Inc.
Duxbury, Massachusetts

STATION P I

Exposure Panels				Control Panels (1 month exposure)		
Months Exposure	Date Removed	<i>Limnoria</i> spp.	Teredinidae	Date Removed	<i>Limnoria</i> spp.	Teredinidae
4	9/21/66	T	T	No Controls		
5	10/20/66	T	S			
6	11/21/66	T	S			
1	6/29/67	T	—	No Controls		
2	7/17/67	T	—			
3	8/24/67	—	—			
1	7/3/68	—	—	7/3/68	—	—
2	8/7/68	—	—	8/7/68	—	—
3	9/13/68	—	S	9/13/68	—	—
4	10/14/68	—	M	10/14/68	T	—
5	11/15/68	T	M	11/15/68	—	—
1	6/30/69	—	—	6/30/69	—	—
2	7/30/69	—	—	7/30/69	—	—
3	8/29/69	T	—	8/29/69	T	—
4	9/30/69	T	S	9/30/69	—	—
5	10/30/69	T	S	10/30/69	—	—
6½	12/18/69	T	M	12/18/69	—	—

STATION P II

Exposure Panels				Control Panels (1 month exposure)		
Months Exposure	Date Removed	<i>Limnoria</i> spp.	Teredinidae	Date Removed	<i>Limnoria</i> spp.	Teredinidae
4	9/19/66	—	T	9/19/66	—	T (embryonic)
5	10/19/66	T	S	10/19/66	—	—
6	11/17/66	—	S	11/17/66	T	—
1	6/16/67	—	—	6/16/67	—	—
2	7/25/67	—	—	7/25/67	—	—
3	8/17/67	—	—	8/17/67	—	—
1	7/3/68	—	—	7/3/68	—	—
2	8/7/68	—	—	8/7/68	—	—
3	9/13/68	T	S	9/13/68	—	T (embryonic)
4	10/14/68	T	M	10/14/68	—	—
5	11/15/68	T	M	11/15/68	—	—
1	6/30/69	—	—	6/30/69	—	—
2	7/30/69	—	—	7/30/69	—	—
3	8/29/69	—	M	8/29/69	—	—
4	9/30/69	T	M	9/30/69	—	—
5	10/30/69	—	M H	10/30/69	—	—
6½	12/18/69	—	H	12/18/69	—	—

STATION P III

Exposure Panels				Control Panels (1 month exposure)		
Months Exposure	Date Removed	<i>Limnoria</i> spp.	Teredinidae	Date Removed	<i>Limnoria</i> spp.	Teredinidae
4	9/16/66	—	S	No Controls		
5	10/18/66	—	S			
6	11/15/66	T	S			
1	6/12/67	—	—	No Controls		
2	7/19/67	T	—			
3	8/21/67	—	—			
1	7/3/68	—	—	7/3/68	—	—
2	8/8/68	—	—	8/8/68	—	—
3	9/12/68	—	S	9/12/68	—	T (embryonic)
4	10/15/68	—	M	10/15/68	—	—
5	11/15/68	—	S	11/15/68	—	—
1	7/2/69	—	—	7/2/69	—	—
2	8/4/69	—	—	8/4/69	—	—
3	9/3/69	—	S	9/3/69	—	—
4	10/1/69	—	S	10/1/69	—	—
5	10/31/69	—	S	10/31/69	—	—
7	12/29/69	—	M	12/29/69	—	—

STATION P IV

Exposure Panels				Control Panels (1 month exposure)		
Months Exposure	Date Removed	<i>Limnoria</i> spp.	Teredinidae	Date Removed	<i>Limnoria</i> spp.	Teredinidae
4	9/16/66	—	T	9/16/66	—	T (embryonic)
5	10/17/66	—	S	10/17/66	—	—
6	11/14/66	T	M	11/14/66	—	—
1	6/26/67	T	T	6/26/67	—	T (embryonic)
2	7/20/67	T	—	7/20/67	—	—
3	No Data			No Data		
1	7/2/68	T	—	7/2/68	—	—
2	8/6/68	T	T	8/6/68	—	—
3	9/12/68	T	M	9/12/68	—	S (embryonic)
4	10/15/68	—	M	10/15/68	—	—
5	11/15/68	T	M H	11/15/68	—	—
1	7/2/69	—	—	7/2/69	—	—
2	8/4/69	T	—	8/4/69	—	—
3	9/3/69	—	T	9/3/69	—	—
4	10/1/69	T	S	10/1/69	—	—
5	10/31/69	T	M	10/31/69	—	—
7	12/30/69	T	M H	12/30/69	—	—

STATION P V

Exposure Panels

Control Panels (1 month exposure)

Months Exposure	Date Removed	<i>Limnoria</i> spp.	Teredinidae	Date Removed	<i>Limnoria</i> spp.	Teredinidae
4	9/20/66	T	M	9/20/66	—	MH (embryonic)
5	10/20/66	T	MH	10/20/66	—	—
6	11/18/66	T	MH	11/18/66	—	—
1	6/23/67	T	—	6/23/67	—	—
2	7/24/67	T	—	7/24/67	—	—
3	8/23/67	T	—	8/23/67	—	—
1	7/2/68	—	—	7/2/68	—	—
2	8/8/68	—	—	8/8/68	—	—
3	9/12/68	T	MH	9/12/68	T	M (embryonic)
4	10/15/68	T	MH	10/15/68	—	—
5	11/15/68	T	H	11/15/68	—	—
1	7/2/69	—	—	7/2/69	—	—
2	8/4/69	—	—	8/4/69	—	—
3	9/3/69	—	M	9/3/69	T	—
4	10/1/69	—	MH	10/1/69	—	—
5	10/31/69	—	VH	10/31/69	—	—
7	12/29/69	T	VH	12/19/69	—	—



